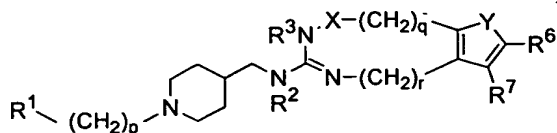


CLAIMS

1. A compound represented by the following formula
(I):



(I)

[wherein R^1 represents phenyl, C_3 - C_8 cycloalkyl or an aromatic heterocyclic group (having 1-3 atoms selected from the group consisting of oxygen, sulfur and nitrogen as hetero atoms),
the phenyl or aromatic heterocyclic group of R^1 may optionally fuse with a benzene ring or aromatic heterocyclic group (having 1-3 atoms selected from the group consisting of oxygen, sulfur and nitrogen as hetero atoms) to form a fused ring,
the phenyl, C_3 - C_8 cycloalkyl or aromatic heterocyclic group, or fused ring, in R^1 may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, cyano, nitro, carboxyl, C_1 - C_6 alkyl, C_3 - C_8 cycloalkyl, C_2 - C_6 alkenyl, C_1 - C_6 alkoxy, C_1 - C_6 alkylthio, C_3 - C_5 alkylene, C_2 - C_4 alkyleneoxy, C_1 - C_3 alkylenedioxy, phenyl, phenoxy, phenylthio, benzyl, benzyloxy, benzoylamino, formyl, C_2 - C_7 alkanoyl, C_2 - C_7 alkoxy carbonyl, C_2 - C_7 alkanoyloxy, C_2 - C_7 alkanoylamino, C_1 - C_6 alkylsulfonyl, C_3 - C_8 (alkoxy carbonyl)methyl, amino, mono(C_1 - C_6 alkyl)amino, di(C_1 - C_6 alkyl)amino, carbamoyl, C_2 - C_7 N-alkylcarbamoyl, C_4 - C_9 N-cycloalkylcarbamoyl, N-

phenylcarbamoyl, piperidylcarbonyl, morpholinylcarbonyl, pyrrolidinylcarbonyl, piperazinylcarbonyl, N-methoxycarbamoyl, (formyl)amino and ureido, and the substituent of the phenyl, C₃-C₈ cycloalkyl or aromatic heterocyclic group, or fused ring, of R¹ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, phenyl, C₃-C₅ alkylene, C₃-C₈ cycloalkyl, C₃-C₈ cycloalkenyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, pyrrolidinyl, piperidyl, C₃-C₇ lactam, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₂-C₇ alkoxycarbonyl, carboxyl, hydroxy, benzoyl, cyano, trifluoromethyl, halogen and tert-butoxycarbonylamino, provided that when R¹ is C₃-C₈ cycloalkyl, the substituent does not include amino, mono(C₁-C₆ alkyl)amino or di(C₁-C₆ alkyl)amino;

p represents an integer of 1-6;

R² and R³ may be the same or different and each independently represents hydrogen, C₁-C₆ alkyl or phenyl, where the C₁-C₆ alkyl or phenyl group of R² and R³ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, C₁-C₆ alkyl, C₂-C₇ alkoxycarbonyl, amino, carbamoyl, carboxyl, cyano and C₁-C₆ alkoxy;

X represents -CO-, -SO₂-, -CH₂-, -CS- or a single bond;

q represents 0 or 1;

r represents 0 or 1;

Y represents -(R⁴)C=C(R⁵)-, -S- or -NR⁸-;

R⁴, R⁵, R⁶ and R⁷ may be the same or different, and each independently represents hydrogen, a halogen, hydroxy, cyano, nitro, carboxyl, C₁-C₆ alkyl, C₃-C₈ cycloalkyl, C₂-C₆

alkenyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, C₃-C₅ alkylene, C₂-C₄ alkyleneoxy, C₁-C₃ alkylendioxy, phenyl, phenoxy, phenylthio, phenylsulfonyl, benzyl, benzyloxy, benzoylamino, formyl, C₂-C₇ alkanoyl, C₂-C₇ alkoxy carbonyl, C₂-C₇ alkanoyloxy, C₂-C₇ alkanoylamino, C₄-C₁₀ cycloalkanoylamino, C₃-C₇ alkenoylamino, C₁-C₆ alkylsulfonyl, C₁-C₆ alkylsulfonylamino, C₃-C₈ (alkoxy carbonyl)methyl, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₄-C₉ N-cycloalkylcarbamoyl, N-phenylcarbamoyl, N-(C₇-C₁₂ phenylalkyl)carbamoyl, piperidyl carbonyl, morpholinyl carbonyl, pyrrolidinyl carbonyl, piperazinyl carbonyl, N-methoxycarbamoyl, sulfamoyl, C₁-C₆ N-alkylsulfamoyl, (formyl)amino, (thioformyl)amino, ureido or thioureido, where the aforementioned groups of R⁴, R⁵, R⁶ and R⁷ each may be independently unsubstituted, or substituted with one or more substituents selected from the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, phenyl, C₃-C₅ alkylene, C₃-C₈ cycloalkyl, C₃-C₈ cycloalkenyl, C₁-C₆ alkoxy, (C₁-C₆ alkoxy)(C₁-C₆ alkoxy), phenyl(C₁-C₆ alkoxy), C₁-C₆ alkylthio, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, pyrrolidinyl, piperidyl, (C₂-C₇ alkanoyl)piperidyl, C₃-C₇ lactam, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₄-C₉ N-cycloalkylcarbamoyl, N-phenylcarbamoyl, N-(C₇-C₁₂ phenylalkyl)carbamoyl, C₂-C₇ alkanoylamino, C₂-C₇ alkoxy carbonyl, carboxyl, hydroxy, benzoyl, cyano, trifluoromethyl, halogens, tert-butoxycarbonylamino, C₁-C₆ alkylsulfonyl and heterocycles or aromatic heterocycles (where a heterocycle or aromatic heterocycle has 1-3 atoms selected from the group consisting of oxygen, sulfur and nitrogen as hetero atoms, and may be substituted with C₁-C₆ alkyl); and R⁸ represents hydrogen or C₁-C₆ alkyl,

where the C₁-C₆ alkyl group of R⁸ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, cyano, nitro, carboxyl, carbamoyl, mercapto, guanidino, C₃-C₈ cycloalkyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, phenyl (where phenyl may be substituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, C₁-C₆ alkyl, C₁-C₆ alkoxy and benzyloxy), phenoxy, benzyloxy, benzyloxycarbonyl, C₂-C₇ alkanoyl, C₂-C₇ alkoxycarbonyl, C₂-C₇ alkanoyloxy, C₂-C₇ alkanoylamino, C₂-C₇ N-alkylcarbamoyl, C₂-C₆ alkylsulfonyl, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino and ureido], a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof.

2. A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -SO₂-.

3. A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CO-.

4. A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CH₂-.

5. A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CS-.

6. A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof,

wherein X in formula (I) is a single bond.

7. A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is $-(R^4)C=C(R^5)-$.

8. A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is $-S-$.

9. A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is $-NR^8-$.

10. A compound according to any one of claims 1 to 9, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R¹ in formula (I) is substituted or unsubstituted phenyl.

11. A compound according to any one of claims 1 to 10, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R² in formula (I) is hydrogen.

12. A compound according to any one of claims 1 to 11, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R³ in formula (I) is hydrogen.

13. A compound according to any one of claims 1 to 12, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein q=0 and r=0 in formula (I).

14. A compound according to any one of claims 1 to 12, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof,

wherein $q=1$ and $r=0$ in formula (I).

15. A compound according to any one of claims 1 to 12, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein $q=0$ and $r=1$ in formula (I).

16. A compound according to any one of claims 1 to 15, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein $p=1$ in formula (I).

17. A compound according to claim 2, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein Y is $-(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$, $r=0$ and $p=1$ in formula (I).

18. A compound according to claim 3, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein Y is $-(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$, $r=0$ and $p=1$ in formula (I).

19. A compound according to claim 4, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein Y is $-(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$, $r=0$ and $p=1$ in formula (I).

20. A compound according to claim 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1 - C_6 alkyl adduct thereof, wherein Y is $-(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$, $r=0$ and $p=1$ in formula (I).

21. A compound according to any one of claims 17 to 20, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R⁴ and R⁵ in formula (I) may be the same or different and each is independently hydrogen, a halogen, hydroxy, cyano, nitro, carboxyl, C₁-C₆ alkyl, C₁-C₆ alkoxy, C₂-C₇ alkoxycarbonyl, C₂-C₇ alkanoylamino, C₁-C₆ alkylsulfonyl, amino, carbamoyl, C₂-C₇ N-alkylcarbamoyl, sulfamoyl or C₁-C₆ N-alkylsulfamoyl.

22. A compound according to any one of claims 17 to 20, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R⁴ and R⁵ in formula (I) may be the same or different and each is independently a halogen, hydroxy, cyano, nitro, C₁-C₆ alkyl, C₁-C₆ alkoxy, C₂-C₇ alkoxycarbonyl, C₁-C₆ alkylsulfonyl or C₁-C₆ N-alkylsulfamoyl.

23. A compound according to any one of claims 17 to 22, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein each R¹ in formula (I) above may be the same or different and is independently hydrogen, a halogen, hydroxy, cyano, nitro, C₁-C₆ alkyl or C₁-C₆ alkoxy.

24. A pharmaceutical composition with CCR3 antagonism, which comprises as an effective ingredient thereof a compound represented by formula (I) above according to any one of claims 1 to 23, a pharmaceutically acceptable acid adduct thereof or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof.

25. A prophylactic and/or therapeutic composition for any disease associated with CCR3, which comprises as an effective ingredient thereof a compound represented by formula (I) above according to any one of claims 1 to 23, a pharmaceutically acceptable acid adduct thereof or a

pharmaceutically acceptable C₁-C₆ alkyl adduct thereof.

26. A prophylactic and/or therapeutic composition according to claim 25, wherein said disease is an allergic condition.

27. A prophylactic and/or therapeutic composition according to claim 26, wherein said allergic condition is bronchial asthma, allergic rhinitis, atopic dermatitis, urticaria, contact dermatitis or allergic conjunctivitis.

28. A prophylactic and/or therapeutic composition according to claim 25, wherein said disease is inflammatory bowel disease.

29. A prophylactic and/or therapeutic composition according to claim 25, wherein said disease is AIDS (Acquired Immune Deficiency Syndrome).

30. A prophylactic and/or therapeutic composition according to claim 25, wherein said disease is eosinophilia, eosinophilic gastroenteritis, eosinophilic enteropathy, eosinophilic fasciitis, eosinophilic granuloma, eosinophilic pustular folliculitis, eosinophilic pneumonia or eosinophilic leukemia.